OIPE
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PATENT & TRADEMARK OFFICE

Clickstream table 80

Websession	HTML page	Position
1059877799704	index.html	1
1059877799704	product.html	2
1059877799704	catalog.html	3
1087643555703	about.html	1
1087643555703	product.html	2
1087643555703	order.html	3
1168740073550	index.html	1
1168740073550	about.html	2
1168740073550	product.html	3
1168740073550	order.html	4
1168740073550	about.html	5
26795398458245	about.html	1
26795398458245	order.html	2
26795398458245	about.html	3

Mapping Web session 90

Websession	di-ID
1059877799704	1
1087643555703	2
1168740073550	3
26795398458245	4

Mapping HTML pages

HTML-Seite	I
index.html	1
about.html	2
product.html	3
catalog.html	4
order.html	5

100

Clickstream table after mapping of Web sessions and HTML pages

TID	T
1	1 3 4
2	2 3 5
3	1 2 3 5 2
4	2 5 2

110

Sequences (minsupp = 50 %) 120

Sequence	Support
1	50 %
2	75 %
3	75 %
5	75 %
1 3	50 %
2 2	50 %
2 3	50 %
2 5	75 %
5 2	50 %
3 5	50 %
2 5 2	50 %
2 3 5	50 %

Sequences after re-mapping (minsupp = 50 %) 130

Sequence	Support
index.htm	50 %
about.html	75 %
product.html	75 %
order.html	75 %
index.html product.html	50 %
about.html about.html	50 %
about.html product.html	50 %
about.html order.html	75 %
order.html about.html	50 %
product.html order.html	50 %
about.html order.html about.html	50 %
about.html product.html order.html	50 %

Fig. 1

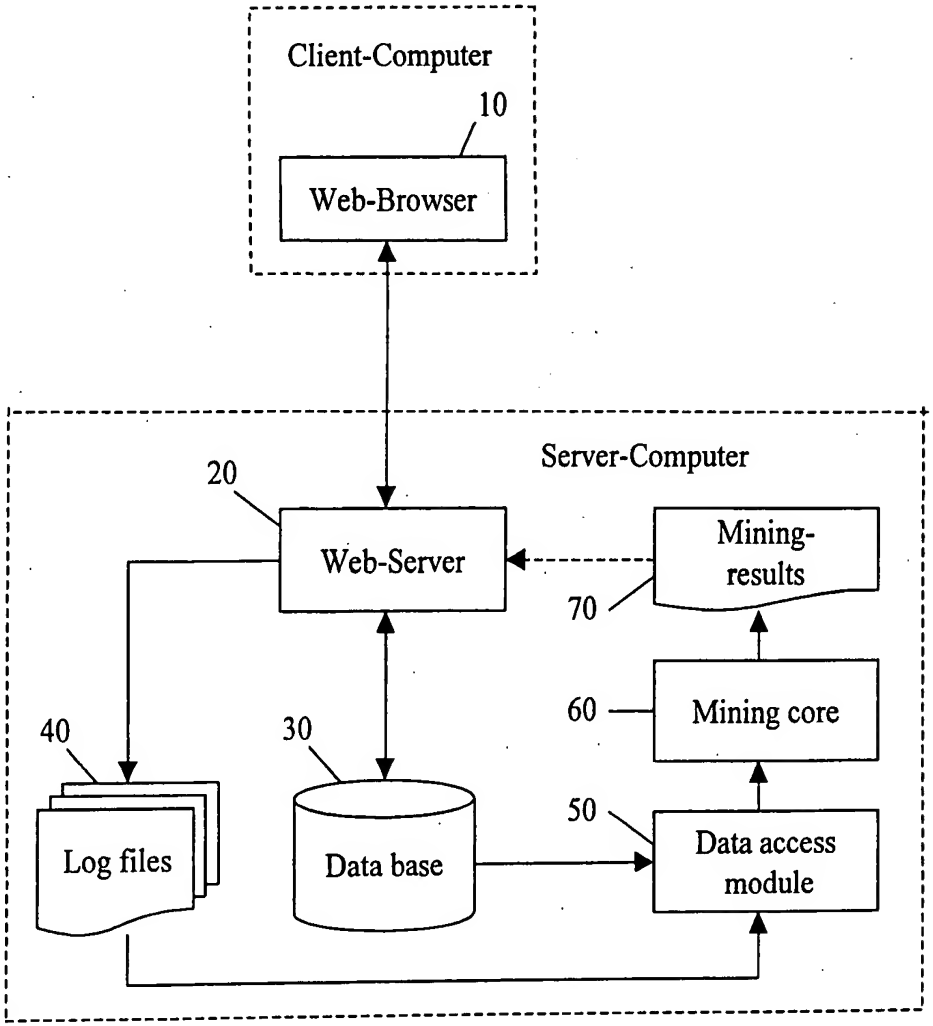
Client-Computer
10
Web-Browser
Server-Computer
20
Web-Server
Mining-
results
70
60
Mining core
40
30
50
Log files
Data base
Data access
module

Fig. 2

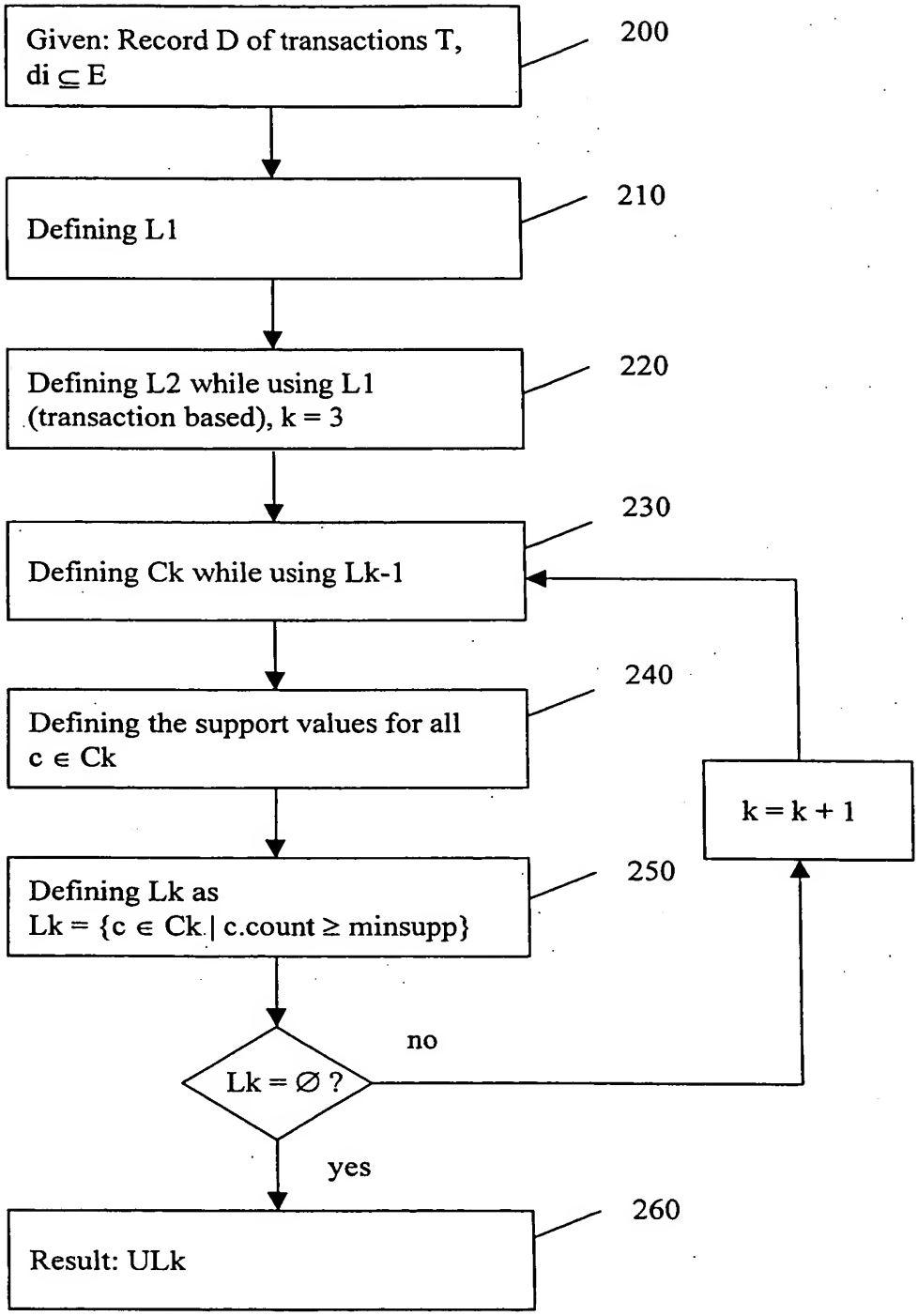
Given: Record D of transactions T, di ⊆ E
200
Defining L1
210
Defining L2 while using L1 (transaction based), k = 3
220
Defining Ck while using Lk-1
230
Defining the support values for all c ∈ Ck
240
Defining Lk as Lk = {c ∈ Ck | c.count ≥ minsupp}
250
k = k + 1
Lk = ∅ ?
no
yes
Result: ULk
260

Fig. 3

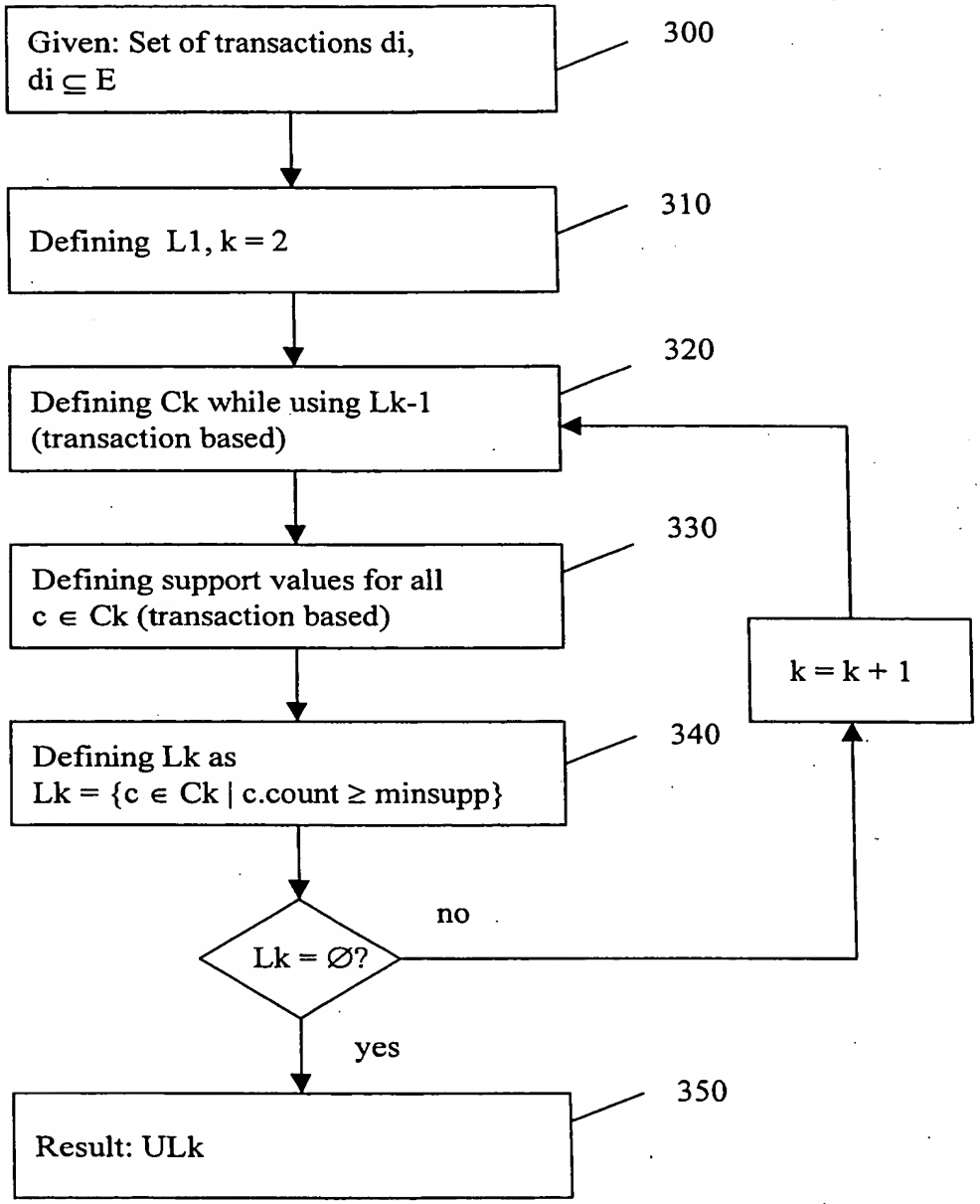
Given: Set of transactions di,
di ⊆ E
300
Defining L1, k = 2
310
Defining Ck while using Lk-1
(transaction based)
320
Defining support values for all
c ∈ Ck (transaction based)
330
Defining Lk as
Lk = {c ∈ Ck | c.count ≥ minsupp}
340
Lk = Ø?
no
yes
k = k + 1
Result: ULk
350

Fig. 4